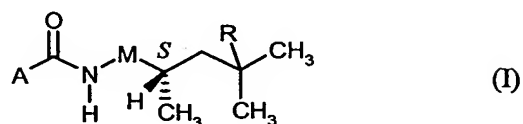


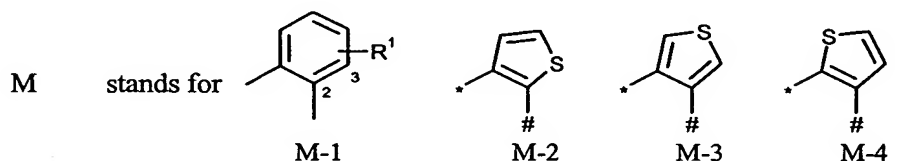
Patent claims

1. Optically active carboxamides of structure (I)



5 in which

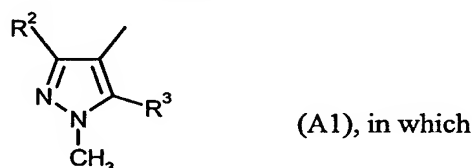
R stands for hydrogen, fluorine, chlorine, methyl, ethyl or trifluoromethyl,



wherein the bond marked with * is coupled with the amide and the bond marked with # is coupled with the alkyl side chain,

10 R¹ stands for hydrogen, fluorine, chlorine, methyl or trifluoromethyl,

A stands for the group of structure (A1)

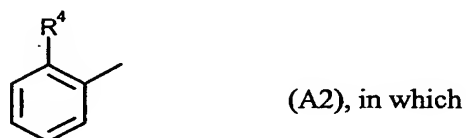


R² stands for methyl, trifluoromethyl or difluoromethyl,

15 R³ stands for hydrogen, fluorine or chlorine,

or

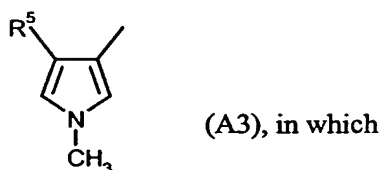
A stands for the group of structure (A2)



R⁴ stands for trifluoromethyl, chlorine, bromine or iodine,

20 or

A stands for the group of structure (A3)



R⁵ stands for methyl, trifluoromethyl or difluoromethyl.

2. Optically active carboxamides of structure (I) as claimed in claim 1, in which

R stands for hydrogen, methyl or ethyl,

M stands for M-1 or M-2,

R¹ stands for hydrogen, fluorine, chlorine, methyl or trifluoromethyl,

5 R² stands for methyl or trifluoromethyl,

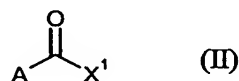
R³ stands for hydrogen or fluorine,

R⁴ stands for trifluoromethyl or iodine,

R⁵ stands for trifluoromethyl.

10 3. Method for the preparation of optically active carboxamides of structure (I) as claimed in claim 1 characterised in that

a) carboxylic acid derivates of structure (II)

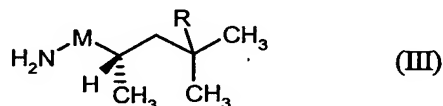


in which

15 A has the meanings defined in claim 1 and

X¹ stands for halogen or hydroxy,

is reacted with an amine of structure (III)

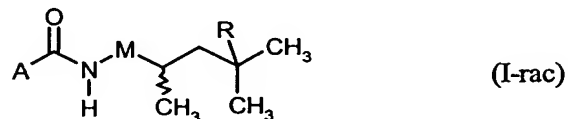


in which R and M have the meanings defined in claim 1,

20 optionally in the presence of a catalyst, optionally in the presence of a condensation agent, optionally in the presence of an acid binding agent and optionally in the presence of a diluent,

or

b) racemic compounds of structure (I-rac),



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in which R, M and A have the meanings defined in claim 1,

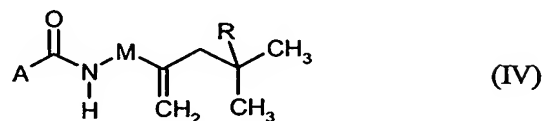
are chromatographed on a chiral silica gel stationary phase in the presence of an eluent or an eluent mixture as the liquid phase,

or is fractionally crystallised with optically active acids under salt formation and subsequently the enantiomerically pure or enriched compounds of structure (I) is released,

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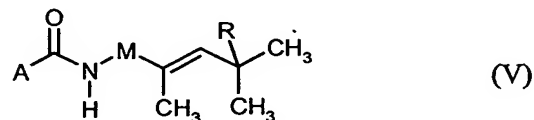
or

c) compounds of structure (IV)



in which R, M and A have the meanings defined in claim 1,

or compounds of structure (V)



in which R, M and A have the meanings defined in claim 1,

or a mixture of both compounds is hydrogenated in the presence of an optically active catalyst or a catalyst with an optically active ligand.

10

4. Agent for the control of detrimental microorganisms characterised by a content of at least one optically active carboxamides of structure (I) as claimed in claim 1 together with diluents and/or surfactants.

15 5. Use of optically active carboxamides of structure (I) as claimed in claim 1 for the control of detrimental microorganisms.

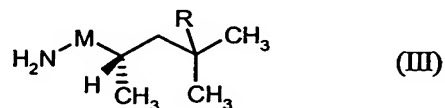
6. Method for the control of detrimental microorganisms characterised in that optically active carboxamides of structure (I) as claimed in claim 1 are applied to the microorganisms and/or their habitat.

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7. Method for the preparation of agents to control detrimental microorganisms characterised in that optically active carboxamides of structure (I) as claimed in claim 1 are mixed with diluents and/or surfactants.

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8. Amines of structure (III)

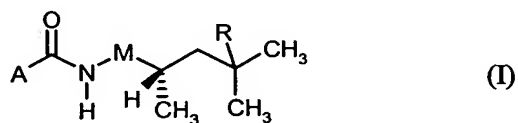


in which R and M have the meanings as defined in Claim 1.

Optically active carboxamides

Summary

New optically active carboxamides of structure (I)



in which R, M and A have the meanings defined in the description,

several methods for their preparation of these compounds and their use for the control of detrimental microorganisms as well as new intermediates and their preparation.